

NEW FORMULA 3.511.6

The original formula is

$$\int_0^{\infty} \frac{\cosh ax \cosh bx}{\cosh cx} dx = \frac{\pi \cos \frac{\pi a}{2c} \cos \frac{\pi b}{2c}}{c \left(\cos \frac{\pi a}{c} + \cos \frac{\pi b}{c} \right)}$$

The change of variables $t = cx$ and writing a/c as a and b/c as b (and going back to x as the integration variable) gives the new formula

$$\int_0^{\infty} \frac{\cosh ax \cosh bx}{\cosh x} dx = \frac{\pi \cos \frac{\pi a}{2} \cos \frac{\pi b}{2}}{\cos \pi a + \cos \pi b}$$